

Notice of Allowability

Application No.

10/796,081

Applicant(s)

LEE, YOUNG GIL

Examiner

Art Unit

Chuck Mah

3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on Oct 11 2005.
2. ☒ The allowed claim(s) is/are 15-25.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Amended claims 15, 20 and 24 as follows:

15. A storage facility comprising:
a main body having **[[a]] at least one** storage room and **[[an]] at least one** opening providing access to said room;
[[a]] at least one door for opening and closing the opening providing access to said storage room; and
hinge means for connecting **[[the]] each** door rotatably to said main body adjacent said opening;
each said hinge means including a first hinge receptacle means secured to said door and a second hinge receptacle means secured to said the main body adjacent said opening and engaged opposingly with said first hinge receptacle; and
a hinge assembly including a fixing member having opposed ends defining passive rotators, each of said rotators having an inner cam surface; and a throughhole

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formed in said fixing member penetrating the passive rotators at the center thereof and defining a pivot axis for said door; said fixing member also having an exterior peripheral surface adapted to be received in one of said first and second hinge receptacles, the exterior peripheral surface of the fixing member and said one of said hinge receptacles in which it is received having first cooperating means preventing rotation of said fixing member in said one of said hinge receptacles during opening and closing of the door;

said hinge assembly also including a pair of rotating cam members respectively located adjacent said opposed ends of the fixing member and each having a rotator cam surface engaged opposingly with the inner cam surface of the adjacent passive rotator of the fixing member and a throughhole penetrating the central portion of the rotating cam members; said rotating cam members being received in the other of said first and second hinge receptacles; the exterior peripheral surface of said rotating cam members and said other of said hinge receptacles in which they are received having second cooperating means preventing rotation of the rotating cam members in that receptacle during opening and closing of the door; a shaft located in and extending through the throughholes of the rotating cam members and the fixing member; stop means at the ends of said shaft extending beyond said rotating cam members, and a pair of elastic members respectively mounted on the ends of said shaft between said rotating cam members and said stop means, whereby when said door is opened and closed said fixing member rotates on said shaft relative to said rotating cam members such that the cam surfaces of said fixing member and rotating cam members move relative to each other to urge the rotating cam members in linear directions along the

shaft under the bias of said elastic members, said cam surfaces of said fixing member and said rotating cam members having

i) first cooperating cam surfaces causing said rotating cam members to move axially along said shaft away from the fixing member as the door is moved from its open to its closed position to compress said elastic members and increase pressure on the rotating cam members to urge them against the fixing member cam surfaces with a continuously increasing force up to a predetermined and almost closed position before the door is fully closed and

ii) second cooperating cam surfaces having a slope counter to the slope of the first cooperating cam surfaces to allow the rotating cam members to move axially along the shaft toward the fixing member to reduce pressure of said elastic members on said rotating cam members as the door moves from its predetermined almost closed position to its fully closed position.

20. A storage facility as defined in Claim 15, wherein the rotator cam surfaces and the inner cam surfaces of the passive rotators each have a horizontally truncated surface which is formed in the axial direction so that they are rotatably engaged in a surface-to-surface contacting manner, and said first and second cooperating cam surfaces are spirally sloped surfaces formed with slopes in the axial direction from the leading end of the horizontally truncated surface, said horizontally truncated surfaces and said spirally sloped surfaces being located in opposition to each other in the open position of the door.


24. A storage facility as defined in Claim 19, wherein said main body has a pair of adjacent storage rooms formed therein and a pair of doors for respectively opening and closing said openings, each said second hinge receptacle being integrally formed in a central portion of the main body adjacent ~~both~~ each of said openings and said first hinge receptacle means being integrally formed on ~~[[the]]~~ a rear surface of ~~[[the]]~~ each said door, ~~second~~ each said first hinge receptacle means comprising a pair of ~~second~~ hinge receptacles integrally formed respectively on said doors, said fixing member being located in said ~~first~~ second hinge receptacle means and said rotation cam members being respectively located in said ~~second~~ pair of hinge receptacles and , auxiliary door supporter means is integrally formed ~~at each end of the main body~~ adjacent each said ~~second~~ pair of hinge receptacles for aiding in pivotally supporting the doors thereby to enable a plurality of doors to be installed by using a single hinge assembly.

2. Examiner has made the changes above in order to obviate a rejection under 35 USC 112. Claim 1 has been amended to match the terms in plural form in claim 24. claim 20 has been amended to provide a proper antecedent basis. Claim 24 has been amended to clarify the locations of the first and second receptacles and the fixing member, based on the disclosure. Original claim 24 renders the claim confusing and raises uncertainty of operability.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuck Mah whose telephone number is (571)272-7059. The examiner can normally be reached on 5/4-9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on (571)272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chuck Mah
Primary Examiner
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